2013 Proposed - Season Setting Evaluation Form

Species: Bighorn Sheep | Period: 6/1/2012 - 5/31/2013

Herd: BS516 - DOUGLAS CREEK

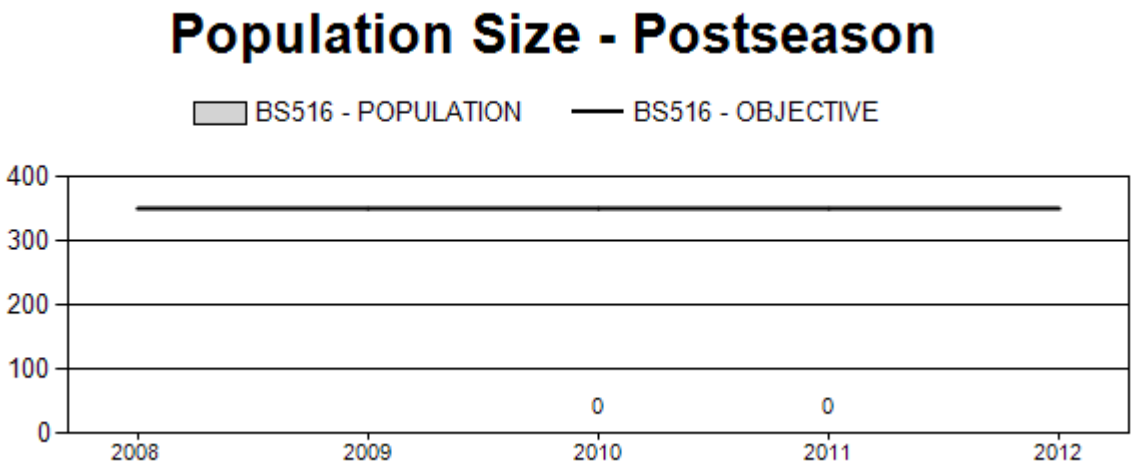
Hunt Areas: 18 | Prepared By: LEE KNOX

	2007 - 2011 Average	2012	2013 Proposed
Population:	0	N/A	N/A
Harvest:	0	2	0
Hunters:	0	2	0
Hunter Success:	0%	100%	0 %
Active Licenses:	0	2	0
Active License Percent:	0%	100%	0 %
Recreation Days:	1	7	0
Days Per Animal:	0	3.5	0
Males per 100 Females	25	57	
Juveniles per 100 Females	27	29	

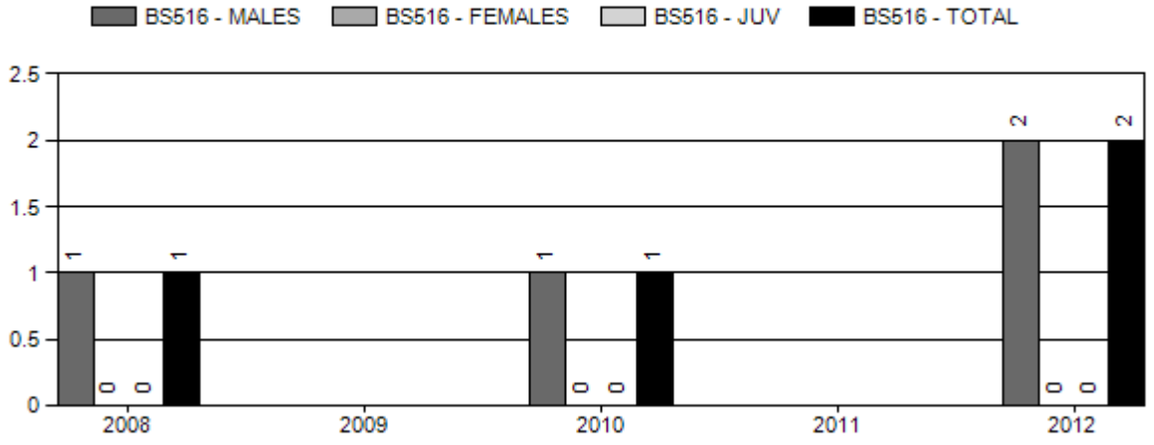
Population Objective:	350
Management Strategy:	Special
Percent population is above (+) or below (-) objective:	N/A%
Number of years population has been + or - objective in recent trend:	20
Model Date:	None

Proposed harvest rates (percent of pre-season estimate for each sex/age group):

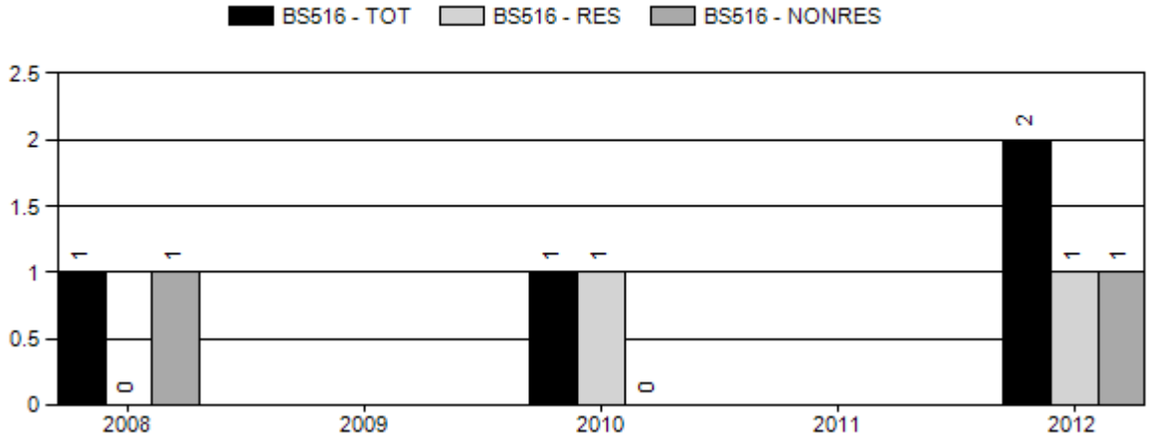
	JCR Year	Proposed
Females ≥ 1 year old:	0%	0%
Males ≥ 1 year old:	0%	0%
Juveniles (< 1 year old):	0%	0%
Total:	0%	0%
Proposed change in post-season population:	0%	0%


Population Size - Postseason
BS516 - POPULATION
BS516 - OBJECTIVE
400
300
200
100
0
0
0
2008
2009
2010
2011
2012

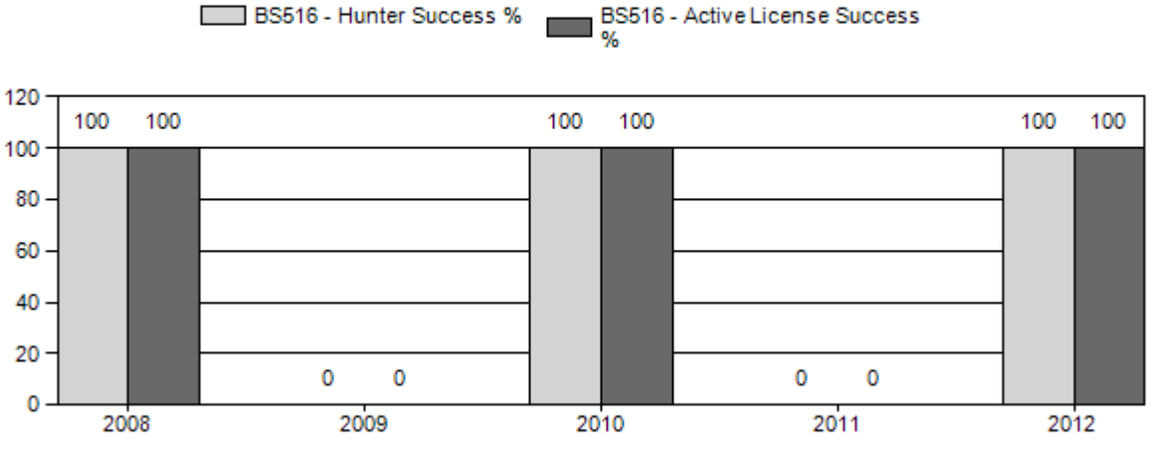
Harvest



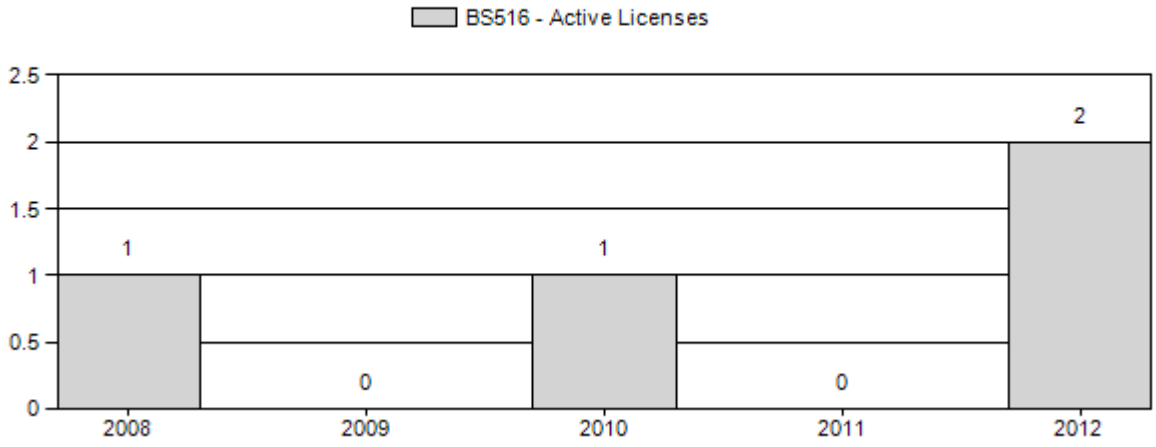
Number of Hunters



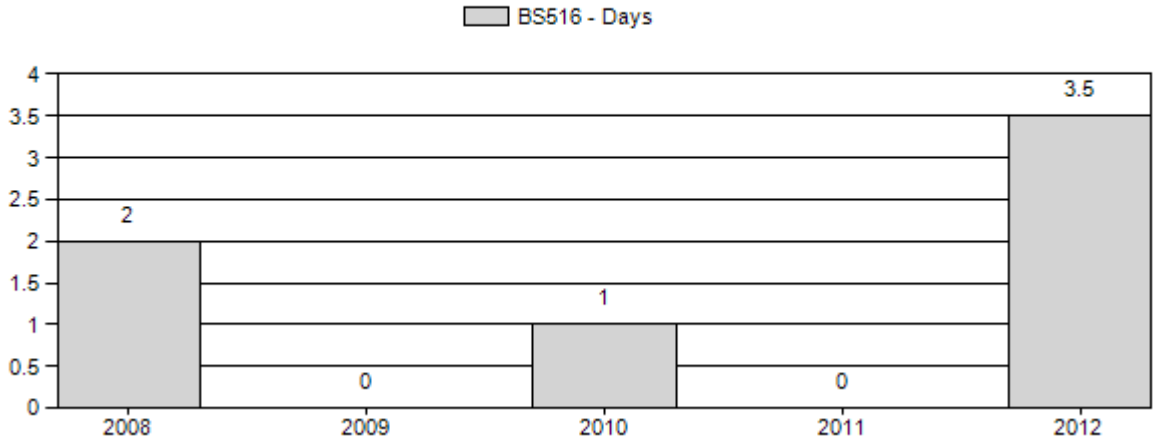
Harvest Success



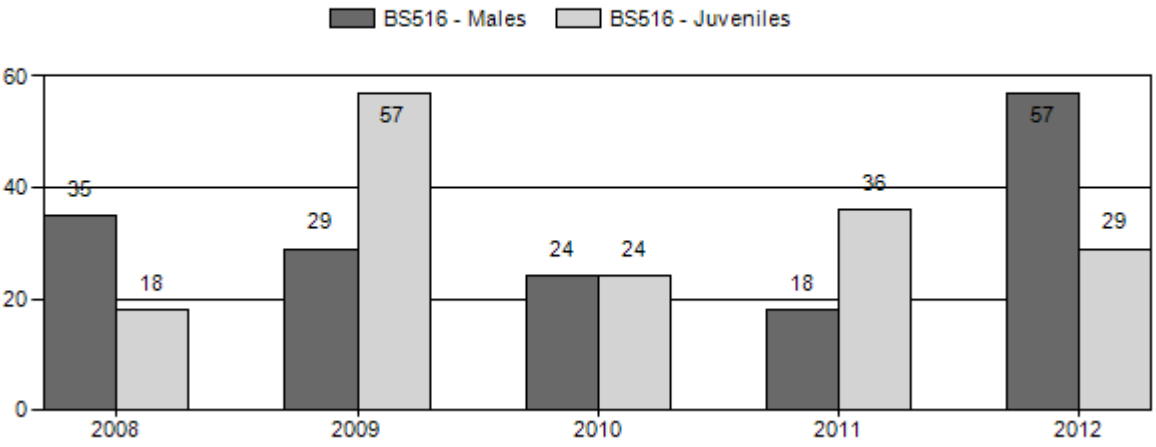
Active Licenses



Days per Animal Harvested



Postseason Animals per 100 Females



2013 HUNTING SEASONS

DOUGLAS CREEK BIGHORN SHEEP (BS516)

Hunt Area	Type	Dates of Opens	Season Closes	Quota	Limitations
18					CLOSED

Area	Type	Change from 2012
18	1	CLOSED
Herd Totals	**1**	**CLOSED**

Management Evaluation

Current Postseason Population Management Objective: 350
2012 Postseason Population Estimate: ~
2013 Proposed Postseason Population Estimate: ~

The management objective for the Douglas creek Bighorn Sheep Herd Unit is a post-season population objective of 350 bighorn sheep. The management strategy is special management. The objective and management strategy were last revised in 1986 and will be reviewed in 2016.

Herd unit Issues

The Douglas Creek Herd Unit is located primarily in the Savage Run and Platte River Wilderness areas in the Snowy Range Mountains on the Medicine Bow National Forest. The herd is under special management guidelines which require the mean age of harvested rams to be between 6-and 8 years old. We have taken this direction to provide trophy opportunity to the public and allow this herd to grow. Pine Beetles have dramatically changed the landscape in the Medicine Bow National Forest where a large percentage of mature pines are dead and starting to fall over. The impacts from the beetle kill are unclear but could improve sheep habitat as the forest becomes more open. Area 18 was closed from 2004 through 2007 and then again in 2009 and 2011 because this population has remained well-below desired levels due to low lamb recruitment. In 2012 we open Area 18 with Area 21 of the Encampment River Herd to provide some limited opportunity for one nonresident and one resident to hunt a bighorn while we still have some sheep left in these populations.

Weather

Weather during 2012 and into 2013 was extremely dry and warmer than normal. The Palmer Drought Severity Index ranked drought conditions in SE Wyoming as severe. The spring and summer of 2012 was one of the driest on record. The winter of 2012-2013 was mild resulting in

good over winter survival. For specific weather information please refer to the following link: http://www.ncdc.noaa.gov/.

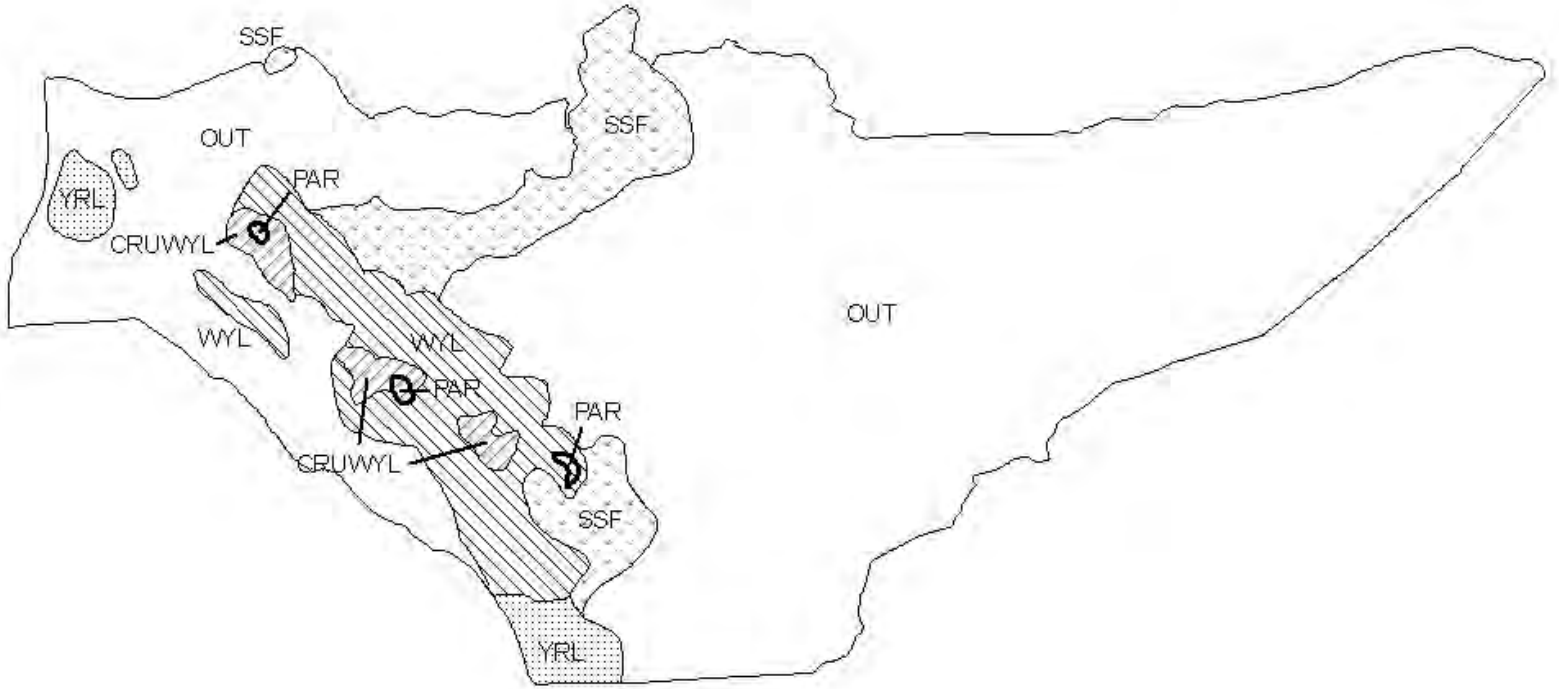
Habitat
Due to recent changes in staff habitat transects were not read in 2013. Current transects have not always been located in the best locations due to terrain or ownership status. We plan to revaluate each transect this spring to improve the quality of data being gathered. The spring and summer of 2012 were severe and little to no new growth was documented by field staff. Most available forge appeared to be growth from 2011. The reader is referred to the Strategic Habitat Plan Annual Report for further background information on shrub transects.

Field Data
We have very little data on this population. The general public provides a few reports during the summer and hunting seasons. Our field personnel make some effort to document the status of segments of the herd during other big game surveys and an annual winter ground survey. Our observation data consistently document low lamb survival post-weaning. Poor habitat conditions, the lack of well-defined seasonal migrations, and perhaps lingering effects of Pasteurellosis or some other disease may be stagnating this population.

Harvest Data
Hunters typically harvest seven year old rams when the season is open so there is adequate opportunity for the limited number of licenses.

Population
Data are not adequate for developing a reasonable simulation model. We are unable to generate the effort needed to reliably estimate the population size of this sheep herd. During 2012 fall classifications personnel accounted for 13 different sheep. These included 4 rams, 7 ewes and 2 lambs. 1 ram was harvested in Hunt Area 18 in 2012. The season will be closed in 2013.

Management Strategy
The season closure will provide an additional year to allow the available rams an opportunity to attain the minimum 6 year old age class specified by the Special Management guidelines.
How will alternating open/closed seasons address the objective?



BHS516 - Douglas Creek
HA 18
Revised 7/02

2012 - JCR Evaluation Form

SPECIES: Bighorn Sheep
PERIOD: 6/1/2012 - 5/31/2013

HERD: BS517 - LARAMIE PEAK

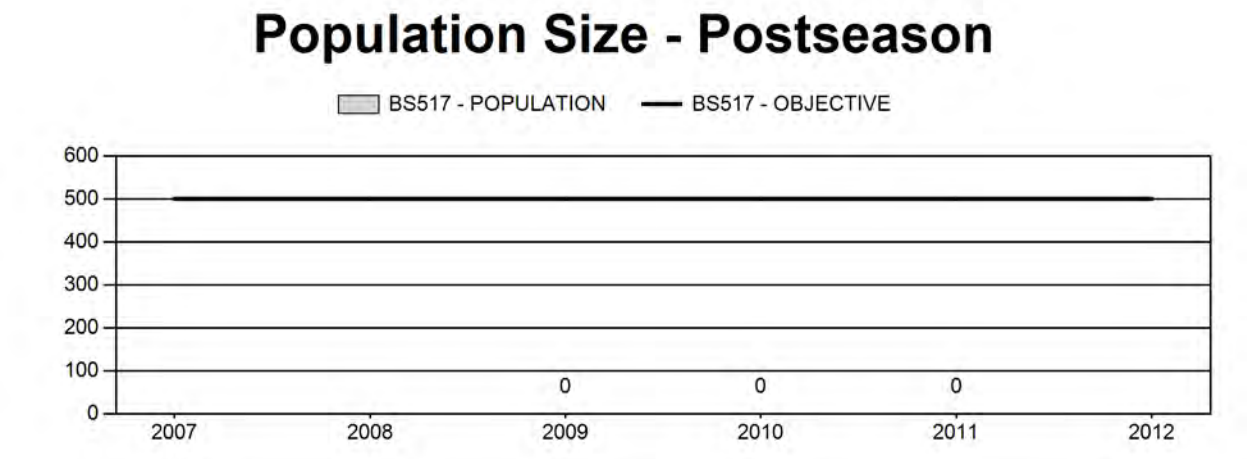
HUNT AREAS: 19
PREPARED BY: MARTIN HICKS

	2007 - 2011 Average	2012	2013 Proposed
Population:	0	N/A	N/A
Harvest:	6	8	8
Hunters:	7	9	8
Hunter Success:	86%	89%	100%
Active Licenses:	7	9	8
Active License Percent:	86%	89%	100%
Recreation Days:	61	119	70
Days Per Animal:	10.2	14.9	8.8
Males per 100 Females	52	47	
Juveniles per 100 Females	34	87	

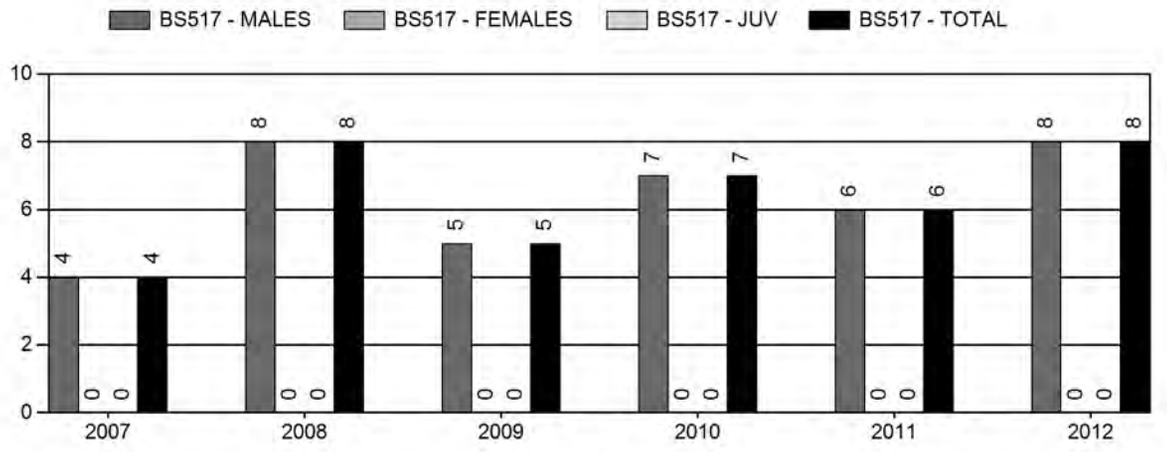
Population Objective:	500
Management Strategy:	Special
Percent population is above (+) or below (-) objective:	N/A%
Number of years population has been + or - objective in recent trend:	0
Model Date:	None

Proposed harvest rates (percent of pre-season estimate for each sex/age group):

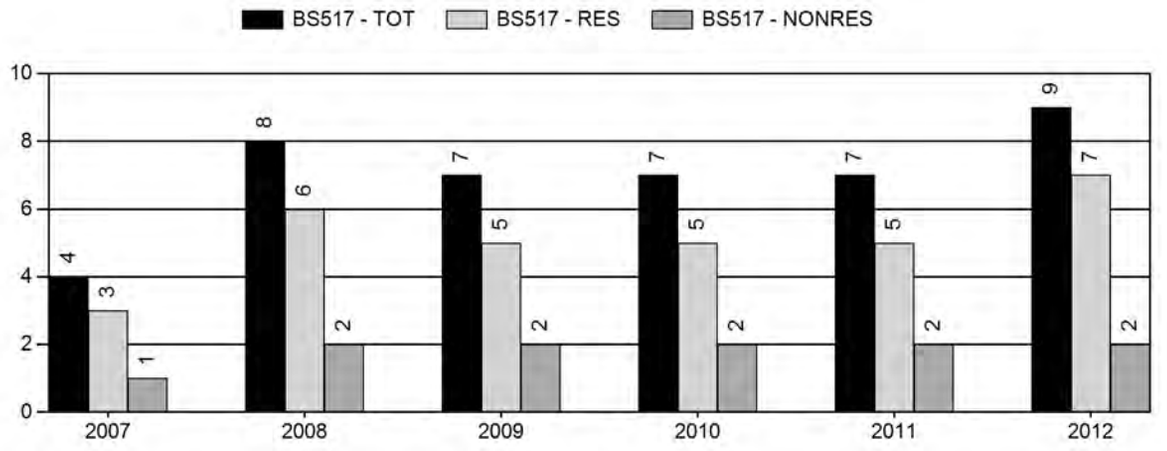
	JCR Year	Proposed
Females ≥ 1 year old:	NA%	na%
Males ≥ 1 year old:	NA%	na%
Juveniles (< 1 year old):	NA%	na%
Total:	NA%	na%
Proposed change in post-season population:	NA%	na%



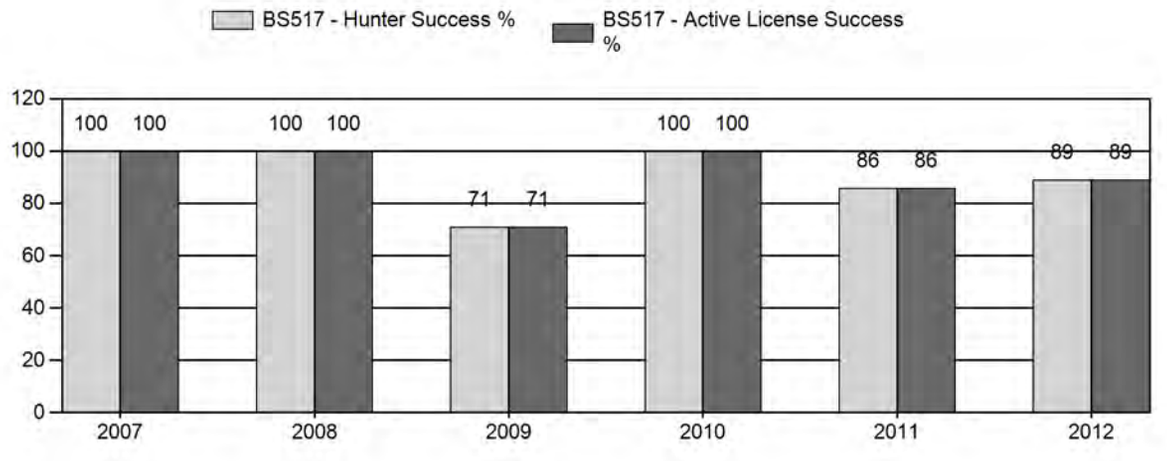
Harvest



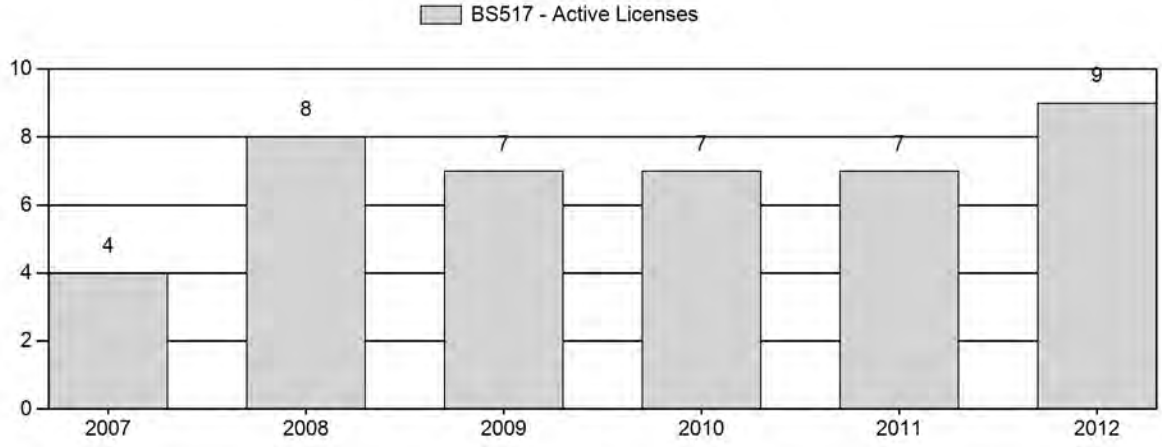
Number of Hunters



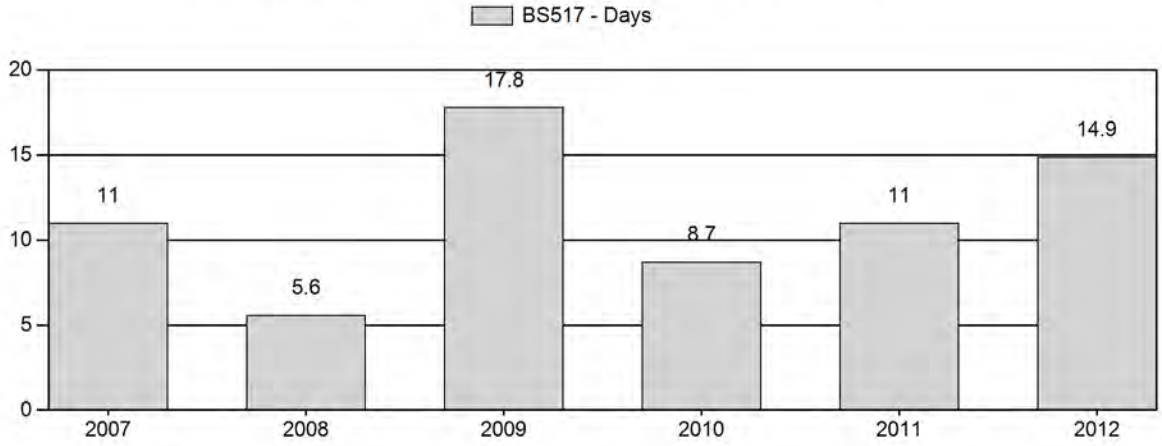
Harvest Success



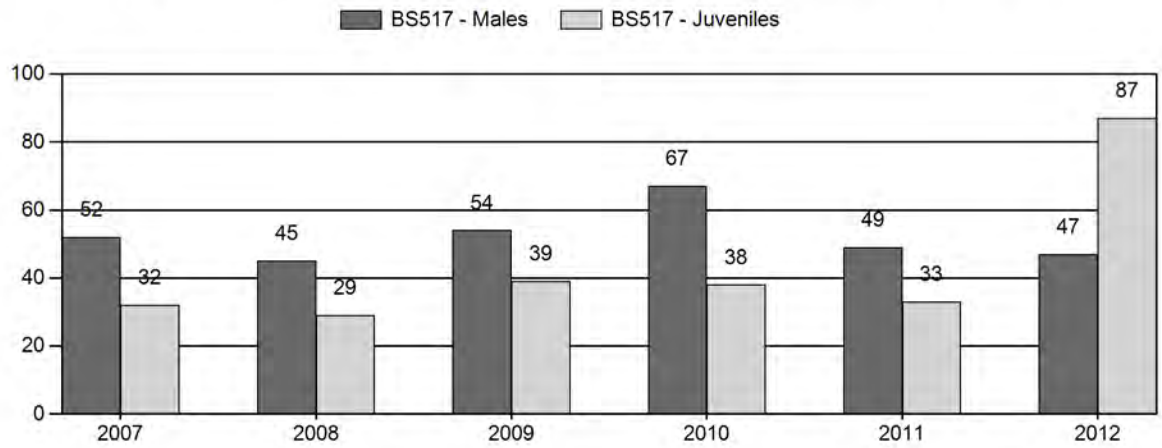
Active Licenses



Days per Animal Harvested



Postseason Animals per 100 Females



2007 - 2012 Postseason Classification Summary

for Bighorn Sheep Herd BS517 - LARAMIE PEAK

		MALES				FEMALES		JUVENILES				Males to 100 Females				Young to		
Year	Post Pop	Ylg	Adult	Total	%	Total	%	Total	%	Tot Cls	Cls Obj	Ylng	Adult	Total	Conf Int	100 Fem	Conf Int	100 Adult
2007	0	2	19	21	28%	40	54%	13	18%	74	0	5	48	52	± 0	32	± 0	21
2008	0	3	26	29	26%	65	58%	19	17%	113	0	5	40	45	± 0	29	± 0	20
2009	0	3	33	36	28%	67	52%	26	20%	129	0	4	49	54	± 0	39	± 0	25
2010	0	3	23	26	32%	39	49%	15	19%	80	0	8	59	67	± 0	38	± 0	23
2011	0	4	20	24	27%	49	55%	16	18%	89	0	8	41	49	± 0	33	± 0	22
2012	0	0	7	7	20%	15	43%	13	37%	35	0	0	47	47	± 0	87	± 0	59

2013 HUNTING SEASONS
LARAMIE PEAK BIGHORN SHEEP HERD (BHS517)

Hunt Area	Type	Dates of Seasons Opens	Closes	Quota	Limitations
19	1	Sep. 1	Oct. 31	8	Limited quota licenses; any ram
Archery		Aug. 15	Aug. 31		Refer to Section 3 of this Chapter

Hunt Area	Type	Quota change from 2012
19	1	0

Management Evaluation
Current Management Objective: 500
2012 Post-season Population Estimate: ~250
2013 Post-season Population Estimate: ~250

Herd Unit Issues
The management objective for the Laramie Peak Bighorn Sheep herd is a post-season population objective of 500 wild sheep. The management strategy is recreational management. The objective and strategy were last revised in 1978. The population objective will be reviewed in 2014.

The Laramie Peak Herd Unit is comprised of 70% private land. The southern portion (south of WY Hwy 34) is over 90% private land. Hunters can expect to pay a trespass or outfitter fee to hunt on private land. There are two state sections that hunters have had success on, but is dependant sheep movement patterns and is not a guaranteed harvest. A portion of occupied sheep habitat was within the 2012 Arapahoe fire that burned over 98,000 acres. This affected sheep distribution post-fire, but this spring wild sheep have moved back into the North Laramie drainage. Perennial grasses and forbs have started to grow within burned areas due to over 3' of snow in April. The fire should have long-term benefits for wild sheep, but initially there will be cheatgrass issues that land managers will need to address. The majority of wild sheep are harvested in the northern portion of the herd unit. The Laramie Peak Wildlife Habitat Management Unit falls within this area where 200 plus sheep inhabit. In 2007 forty-two sheep were released in this area from the Perma-Paradise Herd in Montana. These sheep have thrived and improved the overall genetics and health of the existing herd.

Weather
Weather during 2012 and into 2013 was extremely dry and warmer than normal. Portions of Southeast Wyoming received little summer precipitation. Wyoming also experienced one of its more intense fire seasons. The Arapahoe Fire burned approximately 98,000 acres within the Laramie Range and in addition there were three other fires that burned a total of 19,000 acres. Fire severity was extreme within certain drainages and mosaic in others. Photo-points have been established to monitor plant

succession and response. It is expected over time if this fire behaves like previous fires (i.e. Hensel Fire, Reese Fire) the positives will outweigh the negatives. Shrub species (skunkbrush sumac) and aspen started to re-generate this past fall and opened up conifer canopies for grass species to rejuvenate and expand. Refer to the following websites for weather data: (websites: http://www.ncdc.noaa.gov/temp-and-precip/time-series/ and http://www.ncdc.noaa.gov/oa/climate/research/prelim/drought/pdiimage.html).

Habitat

There are currently no habitat transects specifically for wild sheep. Eighteen transects have been established within the Laramie Range looking at mixed mountain shrub communities as they relate to mule deer use. Since dietary needs for wild sheep differ from mule deer it is hard to correlate any similarities. Precipitation dictates vegetation production. In 2010 and 2011 there was ample amount of forage due to above average moisture. In 2012 there was very little vegetation available, resulting in wild sheep going into the winter in poor body condition. However, there have been several large scale wild fires as well as prescribed fires within occupied wild sheep habitat. These fires have opened up conifer and shrub encroached canopies for grass production, benefiting wild sheep. The reader is referred to the 2012 Strategic Habitat Plan Annual Report for additional habitat information within the Laramie Region (http://wgfd.wyo.gov/web2011/Departments/Wildlife/pdfs/SHP12_AR_LARAMIEREGION0004110.pdf).

Field Data

The 2012 post-season estimate of 250 sheep is based on pre and post-season herd composition data, along with field personnel and hunter observations. There is not a reliable working model for this herd unit. Since 1964 there have been a total of 228 wild sheep released from two herd sources: Whiskey Mountain in Wyoming and Perma-Paradise in Montana (Table 1). These transplants have helped to supplement the herd and improve overall herd health.

Table 1. Transplant release data for the Laramie Peak Bighorn Sheep Herd.

Year	Number	Release Location	Source Herd
1964	40	North Laramie River Canyon	Whiskey Mountain Herd
1965	36	Labonte Canyon	Whiskey Mountain Herd
1966	21	Labonte Canyon	Whiskey Mountain Herd
1973	42	Duck Creek Canyon	Whiskey Mountain Herd
1982	27	Marshall	Whiskey Mountain Herd
1989	20	Marshall	Whiskey Mountain Herd
2007	42	Hay Canyon	Perma-Paradise- MT
Total	228		

Lamb recruitment continues to improve compared to ratios prior to the 2007 release. There was not an adequate sample size collected in 2012 (unable to collect Duck Creek sub-herd data). There were 35 sheep classified in the Sybille Canyon sub-herd with a lamb ratio of 85 lambs per 100 ewes. This is significantly higher than the long-term average of 30 lambs:100 ewes. This increase is likely the result of misclassified sheep

rather than a large increase in lamb production. Efforts to survey the Duck Creek sub-herd in 2013 will be increased.

In 2012, 8 out of 9 sheep harvested, one was a carryover from 2011 due to a medical hardship. The average age was 8 years old, with 5 harvested from the Duck Creek sub-herd and 3 harvested from the Sybille Canyon sub-herd.

Harvest Data

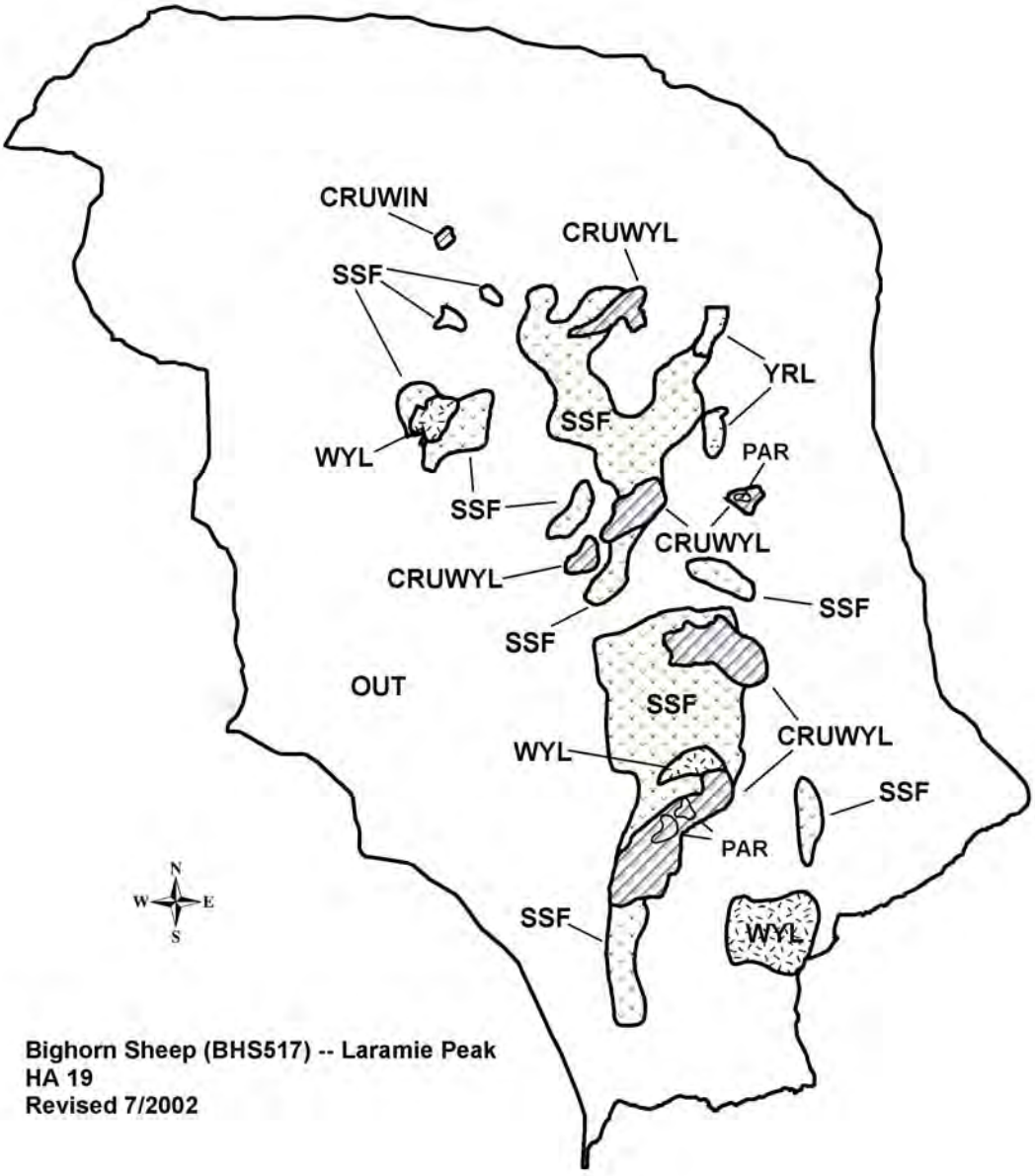
Success continues to approach 100%. This last year hunters harvested 8 out of 9 rams, with a success rate of 88%. Hunters who pre-scout or hire an outfitter typically harvest their ram within 3-5 days. This year it took a hunter 41 days to harvest a ram in Sybille Canyon, which was significantly higher than the ten-year average of 16 days per harvest.

The Laramie Peak sheep season has been running from September 1-October 31 for the past 23 years. Prior to that, the season ran from September 1- October 14. The increased season length appears to provide adequate opportunity to harvest a ram, given this is typically a once in a lifetime license.

In 2012 there were several fires that burned within bighorn sheep occupied habitat. The Arapahoe, Cow Camp and Russell's Camp fires burned over 112,000 acres, with the Arapahoe fire being the largest at 98,000 acres. These fires started in early June just as the lambing began. Fire crews observed wild sheep, mule deer and elk fleeing the fire without juveniles at their side. If these burned areas respond like wild fires in the past it is expected to see in increase in annual vegetation the first two to three years, then stands of perennial grasses and forbs will replace annuals, followed by typical successional plant stages. These fires are expected to beneficial for wild sheep.

There is not a reliable working model for this herd unit due to limited population data collected on an annual basis.

For the 2013 season 8 licenses will be offered valid for any ram. Hunters should have a high probability of harvesting a mature ram. License numbers are adequate to provide opportunity without compromising hunt quality.



Bighorn Sheep (BHS517) -- Laramie Peak
HA 19
Revised 7/2002

2012 - JCR Evaluation Form

SPECIES: Bighorn Sheep
PERIOD: 6/1/2012 - 5/31/2013

HERD: BS519 - ENCAMPMENT RIVER

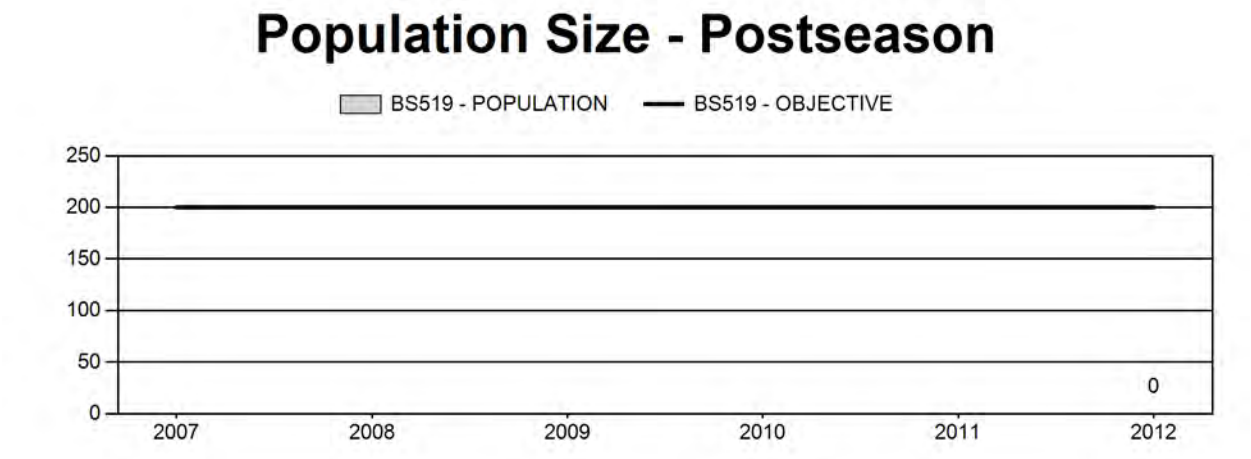
HUNT AREAS: 21
PREPARED BY: WILL SCHULTZ

	2007 - 2011 Average	2012	2013 Proposed
Population:	0	N/A	N/A
Harvest:	0	0	0
Hunters:	0	0	0
Hunter Success:	0%	0%	0 %
Active Licenses:	0	0	0
Active License Percent:	0%	0%	0 %
Recreation Days:	1	0	0
Days Per Animal:	0	0	0
Males per 100 Females	74	0	
Juveniles per 100 Females	29	0	

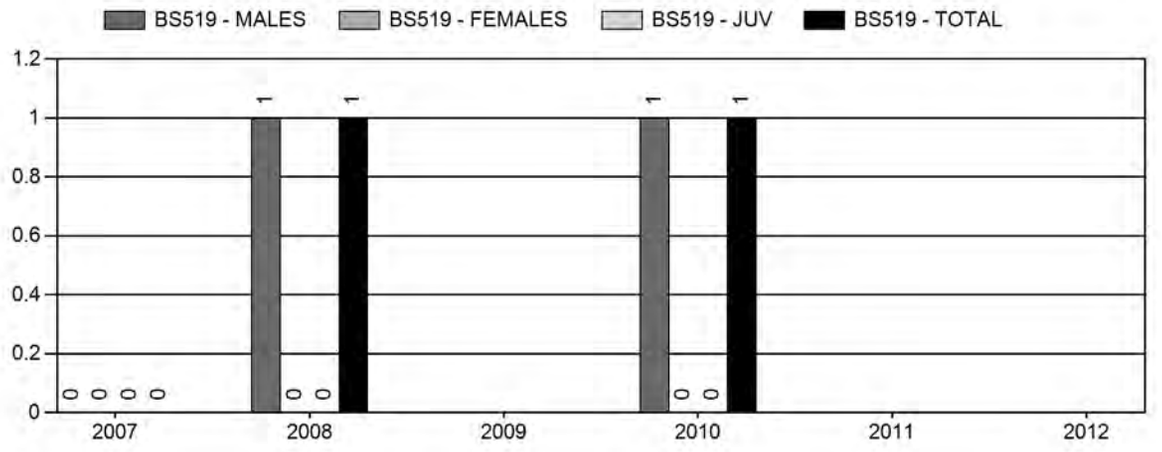
Population Objective:	200
Management Strategy:	Special
Percent population is above (+) or below (-) objective:	N/A%
Number of years population has been + or - objective in recent trend:	20
Model Date:	None

Proposed harvest rates (percent of pre-season estimate for each sex/age group):

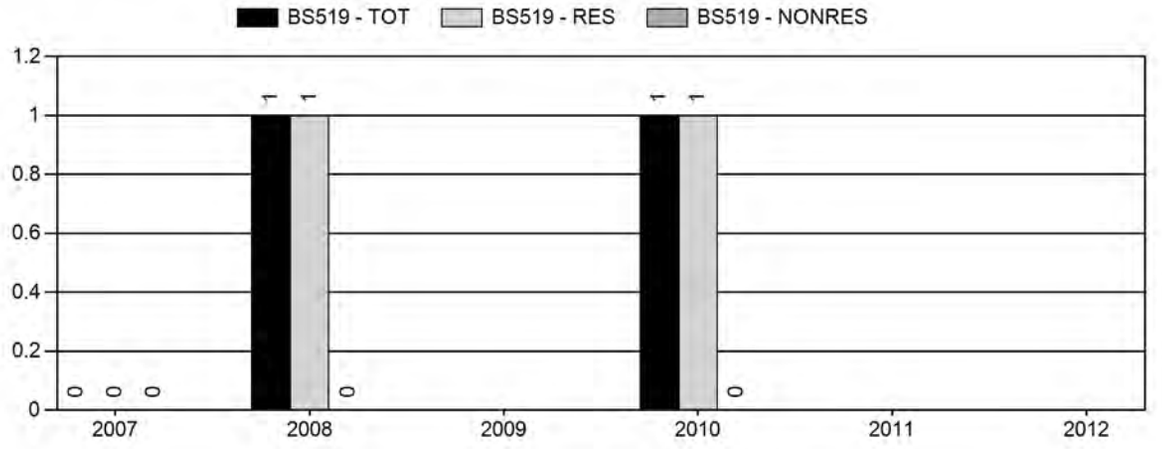
	JCR Year	Proposed
Females ≥ 1 year old:	NA%	NA%
Males ≥ 1 year old:	NA%	NA%
Juveniles (< 1 year old):	NA%	NA%
Total:	NA%	NA%
Proposed change in post-season population:	NA%	NA%



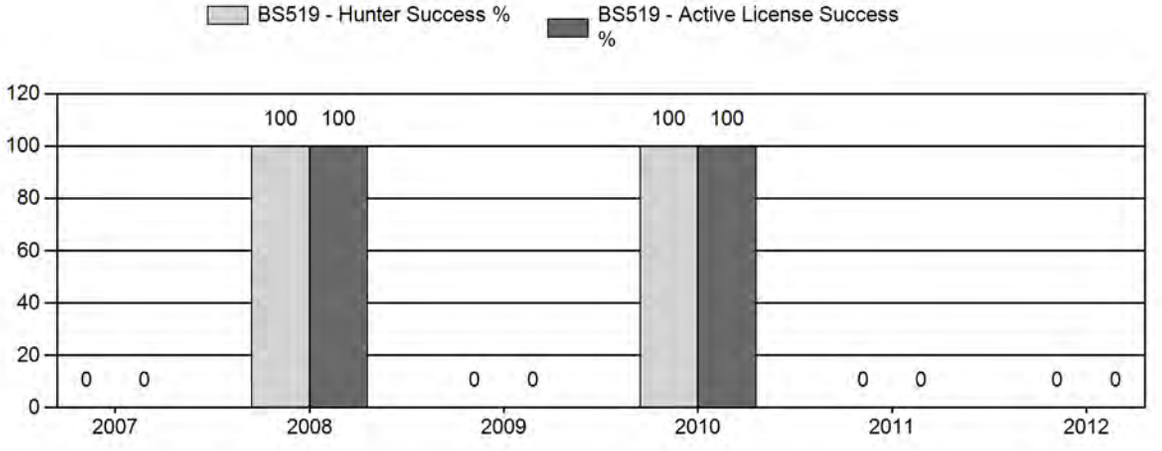
Harvest



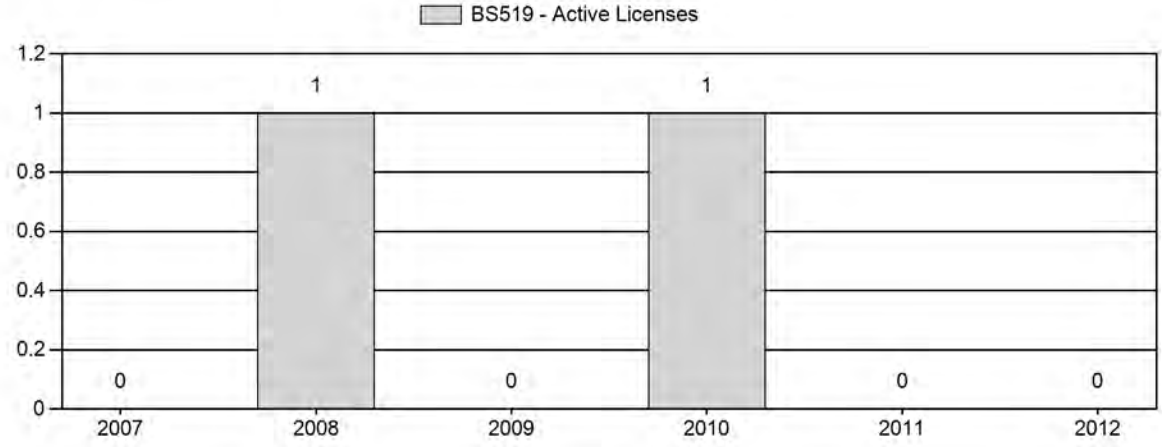
Number of Hunters



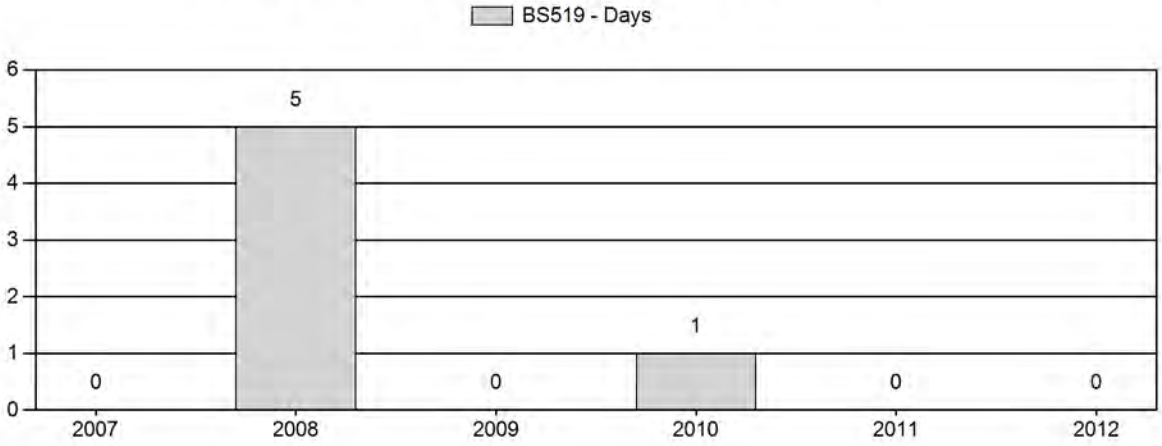
Harvest Success



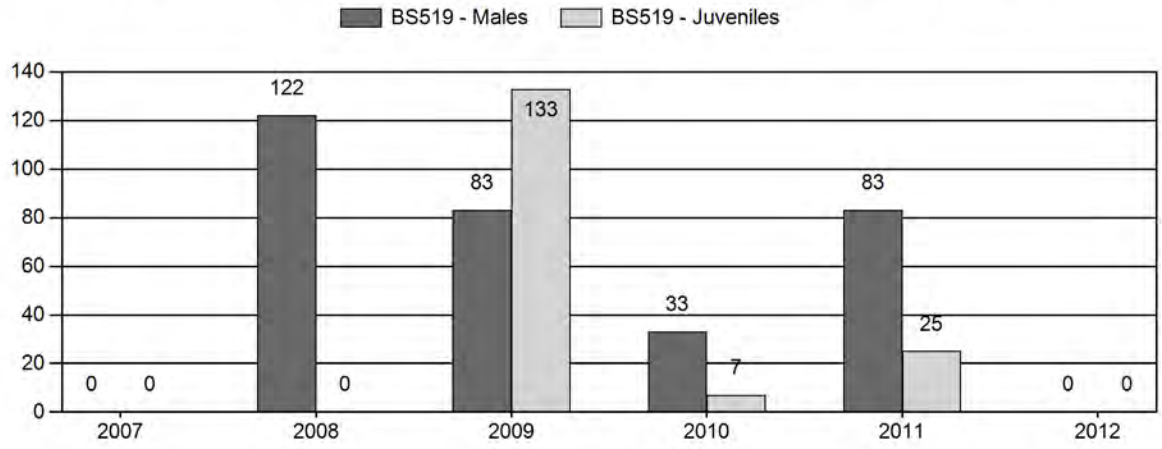
Active Licenses



Days per Animal Harvested



Postseason Animals per 100 Females



2007 - 2012 Postseason Classification Summary

for Bighorn Sheep Herd BS519 - ENCAMPMENT RIVER

		MALES				FEMALES		JUVENILES				Males to 100 Females				Young to		
Year	Post Pop	Ylg	Adult	Total	%	Total	%	Total	%	Tot Cls	Cls Obj	Ylng	Adult	Total	Conf Int	100 Fem	Conf Int	100 Adult
2007	0	0	0	0	0%	0	0%	0	0%	0	0	0	0	0	± 0	0	± 0	0
2008	0	1	10	11	55%	9	45%	0	0%	20	46	11	111	122	± 0	0	± 0	0
2009	0	0	5	5	26%	6	32%	8	42%	19	0	0	83	83	± 0	133	± 0	73
2010	0	0	5	5	24%	15	71%	1	5%	21	0	0	33	33	± 0	7	± 0	5
2011	0	0	10	10	40%	12	48%	3	12%	25	0	0	83	83	± 0	25	± 0	14
2012	0	0	4	4	100%	0	0%	0	0%	4	0	0	0	0	± 0	0	± 0	0

Encampment River Bighorn Sheep (BS519)
Hunt Area 21
2013 Hunting Season

Hunt Area	Type	Dates of Seasons Opens	Closes	Limited Quota	Limitations
21					CLOSED

Hunt Area	Type	Quota change from 2012
18, 21	1	-2
Herd Unit Total	**1**	**-2**

Management Evaluation
Current Management Objective: 200
Management Strategy: Special
2012 Postseason Population Estimate: NA
2013 Proposed Postseason Population Estimate: NA

Bighorn sheep in the Encampment River herd unit are managed toward a numeric objective of 200. A population model has not been constructed for the herd unit. The herd is managed under the bighorn sheep special management strategy. The objective was last reviewed in 1987.

Herd Unit Issues
Bighorn sheep numbers in this herd unit appeared to peak in the late 1970s, not long after reintroduction efforts. Bighorn sheep numbers have been in decline since the early 1980s. The lack of a rebound in numbers has been attributed to decadent habitat. Domestic sheep in grazing on the west slope of the Sierra Madres also poses a disease concern for managers. The population is now at such a low number it is assumed natural recovery is not possible. Limited harvest opportunities have been offered in past years, in combination with the Douglas Creek bighorn sheep herd unit.

Weather
Weather in this herd unit was hot and dry during the past year. This weather pattern most likely had a negative influence on bighorn sheep. For specific meteorological information for the Encampment River herd unit the reviewer is referred to the following links:
http://www.ncdc.noaa.gov/temp-and-precip/time-series/
http://www.ncdc.noaa.gov/oa/climate/research/prelim/drought/pdiimage.html

Habitat
Habitat conditions declined in 2012 with a return to drought conditions experienced across the herd unit. No bighorn sheep habitat production/utilization data was available for this herd unit. However, production was assumed poor and utilization high.

Field Data
Adequate classification data for this herd has been difficult to collect. 2012 postseason classification observations were obtained while conducting a mule deer survey from a helicopter in February of 2013. The classification results were 4 adult rams, and a group of 8 unclassified ewes and lambs. Past postseason classification efforts returned similar results. Based on the trend of this classification data, a reasonable population estimate of 20-40 bighorn sheep should be considered for this herd unit.

Population
A population model has not been constructed for this herd unit due to limited classification and no annual survival information. Observations indicate that lamb survival is poor and this herd is declining. A review of the management objective, currently at 200 bighorn sheep, may be warranted.

Harvest Data
In 2012, two licenses were offered for Hunt Areas 18 and 21 combined. One ram was harvested in each Hunt Area.

Management Summary
We propose to close this hunting season in 2013. We will evaluate the potential for offering a harvest opportunity again in 2014.

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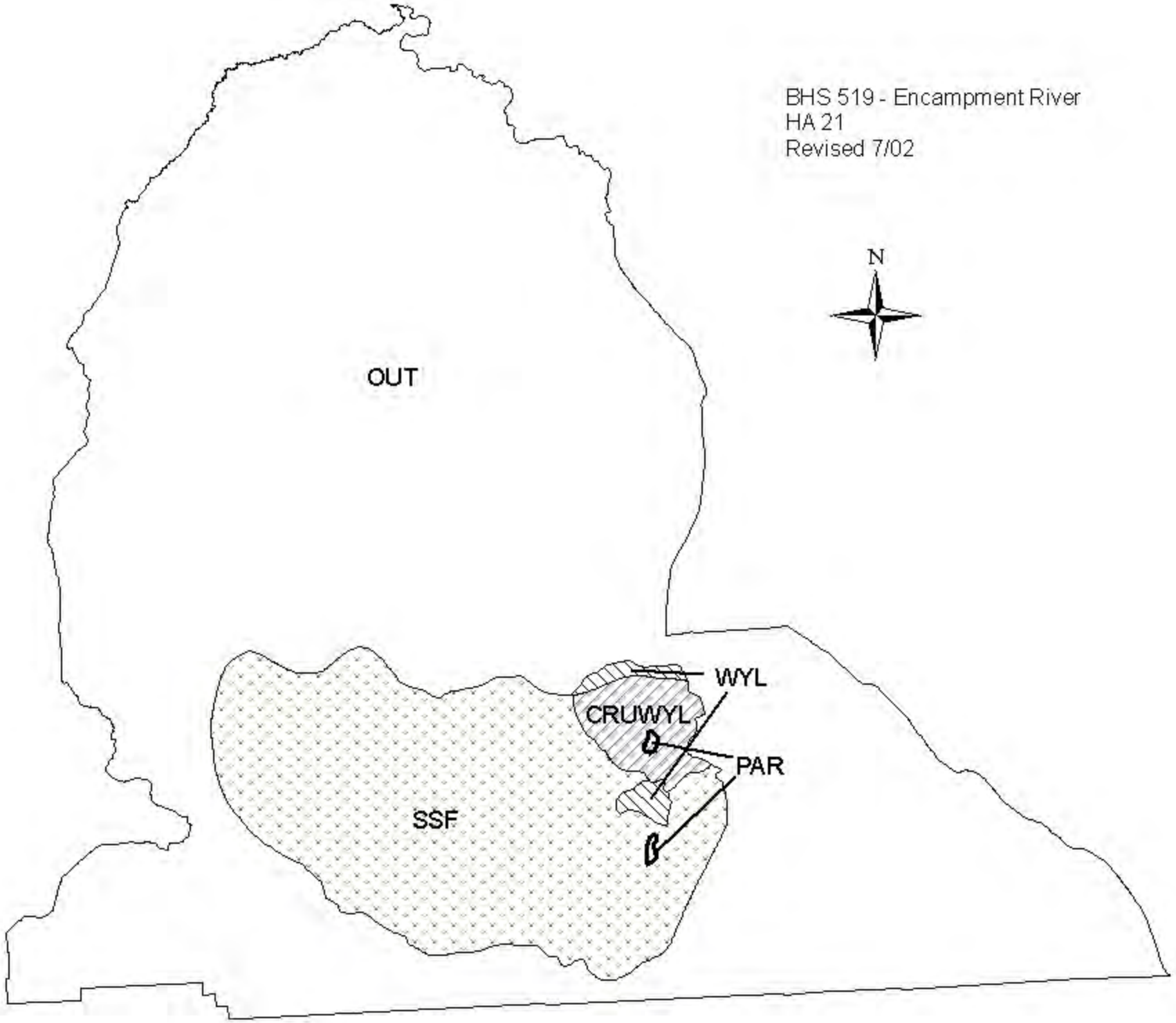
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